

REMARKS/ARGUMENTS

Claims 1 to 4 and 7 to 35 are now before the Examiner. The indication of allowable subject matter in claims 32-35 is noted with appreciation.

In this response, claims 4 and 10 have been amended.

Claim 21 has been withdrawn because it is drawn to a non-elected species. The Applicant reserves the right to reintroduce this claim once generic claim 1 has been allowed. The Examiner's remarks in the Office Action are addressed below.

Rejections Under 35 U.S.C. 112

The Examiner has rejected Claims 4 and 10 under 35 U.S.C. 112, second paragraph, as being indefinite. The Examiner asserts that the phrase "and/or" renders the claims indefinite. Claims 4 and 10 have been amended to refer to "at least one of modifiers and fuel additives" rather than "modifiers and/or fuel additives".

The Examiner has also rejected claims 19 and 31 under 35 U.S.C. 112, second paragraph, as being indefinite. The Examiner asserts that it is not clear how the binder can be any of the explosive compositions listed in these claims. It is respectfully submitted that the use of explosive compositions as binders is known in the art, for example, Schöyer *et al.* teaches the use of GAP or BAMMO as energetic binders (e.g. explosives), as described in Column 3, lines 59-60. Furthermore, the use of binders that are a propellant or gas generator or double-base propellant is clearly described at pages 10 and 11 of the Applicants' specification.

Rejection Under 35 U.S.C. 103

The Examiner has rejected claims 1 to 4, 7 to 20 and 22 to 32 under 35 U.S.C. 103(a) as being unpatentable over Schöyer *et al.* (U.S. Patent No. 4,950,341) in view of Bice *et al.* (U.S. Patent No. 3,995,559).

The Examiner asserts that Schöyer *et al.* discloses a composition for use in a rocket that comprises hydrazinium nitroformate, aluminum, and an energetic binder such as GAP or

BAMMO. The Examiner further acknowledges that Schöyer *et al.* does not disclose the arrangement or shape of the rocket fuel. The Bice *et al.* is said to disclose a rocket fuel that contains hydrazinium nitroformate and can be shaped into any desired grain formation, and the Examiner notes that the propellant can be formed into strips, disks, or wedges; the binder forms a matrix; and the propellant can have any configuration that is desired for final assembly.

The Examiner concludes that one having ordinary skill in the art would use the teaching of Bice *et al.* with the propellant formulation disclosed by Schöyer *et al.* since the teachings of Bice *et al.* would be applicable to any rocket fuel and since the rocket fuel utilized by Bice *et al.* has the same solid oxidizer. Reconsideration by the Examiner and withdrawal of this rejection are respectfully requested.

Bice *et al.* teaches that the fuel and oxidizer should be *separately* encapsulated in the grain (see column 12, lines 29 to 31). The encapsulated fuel and encapsulated oxidizer, separated by binder, are alternately arranged to produce the propellant grain. Schöyer *et al.* teaches a composition for use in a rocket that comprises a *mixture* of hydrazinium nitroformate (oxidizer) and aluminum (fuel) (Column 2, lines 65 to Column 3, lines 1-4 and Column 3, lines 59-60). Since Bice *et al.* teaches that the fuel must not be in direct contact with the oxidizer (see column 12, lines 29 to 31) and Schöyer *et al.* teaches an intimate mixture of the fuel and oxidizer, one skilled in the art would, therefore, not be motivated to combine these two references.

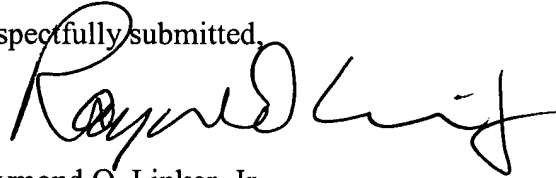
Furthermore, the oxidizer package of the claimed invention comprises pellets separated by binder. In some examples, the pellets may comprise an oxidizer and a fuel or the pellets may comprise an oxidizer and the binder comprises the fuel. In either configuration, the oxidizer and the fuel are in contact with one another. Schöyer *et al.* does not teach or suggest the use of a pellet and Bice *et al.* does not teach or suggest the fuel in direct contact with the oxidizer in the form of the pellet and binder of the claimed invention.

For these reasons, the cited prior art does not teach the claimed combination as defined in claim 1 of record. Furthermore, as set forth above, the teachings of Schöyer *et al.* and Bice *et al.* are not properly combinable to support an obviousness rejection.

For the reasons given above, Applicants respectfully request reconsideration of this application and timely allowance of the pending claims. Applicants submit that the pending claims are in condition for allowance. With the allowance of generic claim 1, claim 21, which is presently withdrawn, should be rejoined and included with the other allowed claims.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

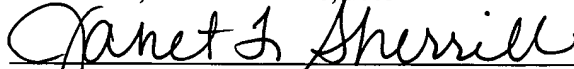


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Janet H. Sherrill